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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|------------------------|---------------------|------------------|
| 10/800,145 | 03/12/2004 | Emmanouil I. Papadakis | 96605/25UTL | 6789 |

7590 05/07/2009
ROBERT W. STROZIER
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| EXAMINER |
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KIM, CHONG R

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| ART UNIT | PAPER NUMBER |
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2624

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| MAIL DATE | DELIVERY MODE |
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05/07/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

| | | | |
|------------------------------|--------------------------------------|---|--|
| Office Action Summary | Application No. 10/800,145 | Applicant(s) PAPADAKIS ET AL. | |
| | Examiner CHARLES KIM | Art Unit 2624 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 March 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 September 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on March 23, 2009 has been entered.

Response to Amendment and Arguments

2. Applicant's amendment filed on March 23, 2009 has been entered and made of record.

Requirement for Information under 37 CFR 1.105

3. Applicant and the assignee of this application are required under 37 CFR 1.105 to provide the following information that the examiner has determined is reasonably necessary to the examination of this application.

In response to this requirement, please provide a copy of the article "Nonseparable bidimensional wavelet bases" by Cohen et. al., which was cited in the article "Non-separable Radial Frame Multiresolution Analysis in Multidimensions and Isotropic Fast Wavelet Algorithms" by Papadakis et al. In addition, please provide a concise explanation of the reliance placed on that publication in the development of the disclosed subject matter.

Specification

4. The specification is objected to because pages 26-27 contain a list of publications cited by the specification. According to the MPEP § 609 A(1) "the list may not be incorporated into the specification but must be submitted in a separate paper." Therefore, Examiner suggests Applicants file a separate information disclosure statement following the requirements of 37 CFR 1.98(b), which requires a list of all patents, publications, or other information submitted for consideration by the Office. The list is improper and thus, must be removed from the specification.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

5. Claim(s) 1-6, 13-24 is/are rejected under 35 U.S.C. 101 as not falling within one of the four statutory categories of invention. Federal Circuit precedent¹ requires that a statutory "process" under 35 U.S.C. 101 must (1) be tied to another statutory category (such as a particular apparatus), or (2) transform underlying subject matter (such as an article or material) to a different state or thing. While the instant claim(s) recite a series of steps or acts to be performed, the claim(s) neither transform underlying subject matter nor positively tie to another statutory

¹ *In re Bilski*, 88 USPQ2d 1385 (Fed. Cir. 2008).

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category that accomplishes the claimed method steps, and therefore do not qualify as a statutory process under 35 U.S.C. 101.²

Applicant's amendment to claims 1 and 4, adding the limitation "implemented on a computer" fails to overcome the 101 rejection above because the computer is recited in the preamble and thus, is not given any patentable weight.

6. Claims 11-12 are rejected under 35 U.S.C. 101 because the claims merely recite mathematical functions. Although a "computer" is recited in the claim, the recitation of the computer is in the preamble and thus, is not given patentable weight.

7. Claims 13-14 are further rejected under 35 U.S.C. 101 because the claims are nothing more than a mathematical algorithm. See MPEP 2106.02.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. Claims 7-10 are rejected under 35 U.S.C. 102(b) as being anticipated by Bouchard et al., U.S. Patent No. 5,898,798 ("Bouchard").

Referring to claim 7, Bouchard discloses a system for processing signals implemented on a computer comprising:

² Claim 15's recitation of a computer does not make the claim statutory because the computer is recited in the preamble and therefore, not given patentable weight.

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a processing unit having encoded thereon a completely isotropic, non-separable ideal filter for frame multi-resolution analysis software including [col. 4, ll. 13-35 and col. 5, ll. 57-67]:

wavelets adapted to resolve a multidimensional signal into various resolution levels [col. 3, ll. 29-39 and col. 4, ll. 13-35], where the wavelets are derived from:

isotropic, non-separable ideal windows or filters in a dimension greater than 1, isotropic, non-separable low pass filters, isotropic, non-separable high pass filters and isotropic, non-separable filters that cover a desired frequency range or plurality of frequency ranges; and isotropic, non-separable frame scaling functions where translations of the frame scaling functions form a frame [col. 4, ll. 13-35. Note the bidimensional non-separable low and high-pass filters and scaling functions that allow the image to be processed in an isotropic way.];

where the system resolves or decomposes multidimensional signals, data, information, or images into a plurality of non-overlapping sub-bands sets or resolution levels with the at least one isotropic, non-separable wavelet improving analysis efficiency and improving analysis of more complex multidimensional signals, data, information or images [col. 3, ll. 29-39 and col. 4, ll. 13-35].

Referring to claims 8-10, Bouchard further discloses that each isotropic, non-separable high pass and each isotropic, non-separable low pass filter comprise: a plurality of isotropic, non-separable high pass and isotropic, non-separable low pass components, each component including at least one isotropic, non-separable relative low pass subcomponent and at least one isotropic, non-separable relative high pass subcomponent [col. 4, ll. 13-35 and fig. 3].

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Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Charles Kim whose telephone number is 571-272-7421. The examiner can normally be reached on Mon thru Thurs 8:30am to 6pm and alternating Fri 9:30am to 6pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Samir Ahmed can be reached on 571-272-7413. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/CHARLES KIM/
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Art Unit 2624
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May 6, 2009